WHAT IS CLAIMED IS:

1. A process for producing a semiconductor wafer having an edge, by etching a surface of the semiconductor wafer comprising

flowing an etching medium in a laminar flow along a direction of flow toward the edge of the semiconductor wafer;

placing a protective shield in front of the edge of the semiconductor wafer; and

causing the etching medium to flow firstly onto the protective shield and not onto the edge of the semiconductor wafer, and then causing the etching medium to have a laminar flow across the wafer surface.

2. The process as claimed in claim 1, comprising

inclining the semiconductor wafer with respect to the direction of flow of the etching medium,

so that there is an angle of less than 180° between the direction of flow of the etching medium and a first side of the semiconductor wafer, and so that there is an angle of greater than 180° between the direction of flow of the etching medium and a second side of the semiconductor wafer; and

subsequently polishing the second side of the semiconductor wafer.

3. A process for producing a semiconductor wafer having an edge, by etching and polishing of the semiconductor wafer comprising,

during etching of the semiconductor wafer flowing an etching medium in a laminar flow along a direction of flow toward the edge of the semiconductor wafer;

inclining the semiconductor wafer with respect to the direction of flow of the etching medium, so that there is an angle of less than 180° between the direction of flow of the etching medium and a first side of the semiconductor wafer; and

so that there is an angle of greater than 180° between the direction of flow of the etching medium and a second side of the semiconductor wafer; and

subsequently polishing the second side of the semiconductor wafer.

4. The process as claimed in claim 1, comprising

rotating the semiconductor wafer during the etching.

5. The process as claimed in claim 2 comprising rotating the semiconductor wafer during the etching.

6. The process as claimed in claim 3, comprising rotating the semiconductor wafer during the etching.

7. The process as claimed in claim 2, comprising inclining the semiconductor wafer by 1° to 10° out of the direction of flow of the etching medium.

8. The process as claimed in claim 3, comprising inclining the semiconductor wafer by 1° to 10° out of the direction of flow of the etching medium.

9. The process as claimed in claim 4, comprising inclining the semiconductor wafer by 1° to 10° out of the direction of flow of the etching medium.